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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/534,339

05/10/2005

David Phillip Devonald

056258-5105

4731

9629 7590 02/11/2008
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EXAMINER

MARTIN, LAURA E

ART UNIT

PAPER NUMBER

2853

MAIL DATE

DELIVERY MODE

02/11/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/534,339	Applicant(s) DEVONALD, DAVID PHILLIP	
	Examiner LAURA E. MARTIN	Art Unit 2853	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 November 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13, 15-20, 22 and 23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13, 15-20, 22 and 23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Terminal Disclaimer

The terminal disclaimer filed on 1/04/08 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of US 7153351 B2 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Claim Objections

Claims 1, 5, 6, 7-9, and 12 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The word "optionally" is non-limiting, therefore, the limitations that are optional are not considered as part limiting.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 6-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Sparks (US 2370500 A).

Sparks discloses the following claim limitations:

As per claim 6: a tris-azo compound of Formula (1) or salt thereof wherein:

A is an optionally substituted alkenyl, homocyclic or heterocyclic group;

L1 and L2 are each independently optionally substituted aryl or heteroaryl; and

m and n are each independently 0 or 1 such that m+n is 1 or 2;

wherein:

(i) the compound of Formula (1) is not in the form of a metal chelate; and

(ii) at least one of L1 and L2 carries at least one substituent selected from sulpho, carboxy, C₁₋₄-alkoxy and C₁₋₄-alkoxy-OH

(iii) optional substituents present on L1 and L2 are selected from OH, SO₃H, CN, carbonamido, PO₃H₂, CO₂H, NO₂, NH₂, optionally substituted alkyl, optionally substituted alkoxy, optionally substituted aryl, optionally substituted amine and optionally substituted acylamine;

(iv) at least one of L1 and L2 carries at least one substituent selected from sulpho, carboxy, C₁₋₄-alkoxy and C₁₋₄-alkoxy-OH;

(v) when L1 carries a methoxy group A is not 1,3-diaminophenyl; and

(vi) L1 and L2 each independently carries 0 to 3 substituents such that at least one of L1 and L2 carries at least one substituent selected from the group consisting of sulpho and carboxy (page 2 and column 2, lines 1-55).

As per claim 7: A is optionally substituted pyridyl, furyl, thienyl, thiazolyl, isothiazolyl, imidazolyl, benzimidazolyl, pyrazinyl, pyrimidyl, quinolyl, isoquinolyl, benzofuryl, benzothienyl, pyrazolyl, indolyl, purinyl, isoxazolyl, oxazolyl, thiadiazolyl,

Art Unit: 2853

furazanyl, pyridonyl, pyrazolonyl, piperidinyl, piperazinyl, pyrrolidinyl, morpholinyl, tetrahydrofuranyl, tetrahydrothiophenyl or tetrahydropyranyl (optionally does not mean that A has to be substituted by any of the listed formulas).

As per claim 8: A is optionally substituted pyridonyl (optionally does not mean that A has to be substituted by the listed formula).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 5, 9-12, and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sparks (US 2370500 A) in view of Ciba Limited (GB 741578 A).

Sparks et al. disclose the following claim limitations:

As per claim 1: a tris-azo compound of Formula (1) or salt thereof wherein:
A is an optionally substituted alkenyl, homocyclic or heterocyclic group;
L1 and L2 are each independently optionally substituted aryl or heteroaryl; and
m and n are each independently 0 or 1 such that m+n is 1 or 2;
wherein:

(i) the compound of Formula (1) is not in the form of a metal chelate; and
(ii) at least one of L1 and L2 carries at least one substituent selected from sulpho, carboxy, C₁₋₄-alkoxy and C₁₋₄-alkoxy-OH

(iii) optional substituents present on L1 and L2 are selected from OH, SO₃H, CN, carbonamido, PO₃H₂, CO₂H, NO₂, NH₂, optionally substituted alkyl, optionally substituted alkoxy, optionally substituted aryl, optionally substituted amine and optionally substituted acylamine;

(iv) at least one of L1 and L2 carries at least one substituent selected from sulpho, carboxy, C₁₋₄-alkoxy and C₁₋₄-alkoxy-OH;

(v) when L1 carries a methoxy group A is not 1,3-diaminophenyl

Sparks et al. do not disclose the following limitations:

As per claim 1: applying onto a composition comprising a liquid medium and a tri—azo compound.

As per claim 9: wherein L1 is phenyl or naphthyl optionally carrying a substituent selected from sulpho or carboxy.

As per claims 10 and 11: wherein L2 is phenyl or naphthyl carrying at least one substituent selected from sulpho, carboxy, C₁₋₄-alkoxy-OH.

As per claims 5 and 12: A is optionally substituted pyridyl, furyl, thienyl, thiazolyl, isothiazolyl, imidazolyl, benzimidazolyl, pyrazinyl, pyrimidyl, quinolyl, isoquinolyl, benzofuryl, benzothienyl, pyrazolyl, indolyl, purinyl, isoxazolyl, oxazolyl, thiadiazolyl, furazanyl, pyridonyl, pyrazolonyl, piperidiny, piperazinyl, pyrrolidiny, morpholinyl, tetrahydrofuranyl, tetrahydrothiophenyl or tetrahydropyranyl; L1 is phenyl or naphthyl optionally carrying a substituent selected from sulpho and carboxy; L2 is phenyl or naphthyl carrying at least one substituent selected from sulpho, carboxy C₁₋₄-alkoxy and C₁₋₄-alkoxy-OH; and m and n are each independently 0 or 1 such that m+n is 1 or 2;

Art Unit: 2853

wherein said optional substituents are selected from OH; SO₃H; CN; carbonamido; PO₃H₂; CO₂H; NO₂; NH₂; C₁₋₄-alkyl optionally carrying a sulpho, carboxy, phosphato, C₁₋₄-alkoxy, amino or hydroxy group; C₁₋₄-alkoxy optionally carrying a sulpho, carboxy, phosphato, C₁₋₄-alkoxy, C₁₋₄alkyl, amino or hydroxy group; phenyl or phenyl.

As per claim 15: wherein a low melting point solid or a liquid medium comprising water and an organic solvent wherein the compound of formula 1 is not formula 3 or a salt thereof.

As per claim 16: a compound of formula 1 or a salt thereof and a low melting point solid or a liquid medium comprising water and an organic solvent.

As per claim 17: a concentration of less than 500 ppm of halide ions, wherein parts refer to parts by weight relative to the total weight of the concentration.

As per claim 18, less than 50 ppm of divalent or trivalent metals, wherein parts refer to parts by weight relative to the total weight of the composition.

Ciba Limited discloses the following claim limitations:

As per claim 1: applying onto a composition comprising a liquid medium and a tri—azo compound (page 1 and page 5).

As per claim 9: wherein L1 is phenyl or naphthyl optionally carrying a substituent selected from sulpho or carboxy (page 1, lines 5-55).

As per claims 10 and 11: wherein L2 is phenyl or naphthyl carrying at least one substituent selected from sulpho, carboxy, C₁₋₄-alkoxy-OH (page 1, lines 5-55).

As per claims 5 and 12: A is optionally substituted pyridyl, furyl, thienyl, thiazolyl, isothiazolyl, imidazolyl, benzimidazolyl, pyrazinyl, pyrimidyl, quinolyl, isoquinolyl,

Art Unit: 2853

benzofuryl, benzothienyl, pyrazolyl, indolyl, purinyl, isoxazolyl, oxazolyl, thiadiazolyl, furazanyl, pyridonyl, pyrazolonyl, piperidinyl, piperazinyl, pyrrolidinyl, morpholinyl, tetrahydrofuranyl, tetrahydrothiophenyl or tetrahydropyranyl; L1 is phenyl or naphthyl optionally carrying a substituent selected from sulpho and carboxy; L2 is phenyl or naphthyl carrying at least one substituent selected from sulpho, carboxy C₁₋₄-alkoxy and C₁₋₄-alkoxy-OH; and m and n are each independently 0 or 1 such that m+n is 1 or 2; wherein said optional substituents are selected from OH; SO₃H; CN; carbonamido; PO₃H₂; CO₂H; NO₂; NH₂; C₁₋₄-alkyl optionally carrying a sulpho, carboxy, phosphato, C₁₋₄-alkoxy, amino or hydroxy group; C₁₋₄-alkoxy optionally carrying a sulpho, carboxy, phosphato, C₁₋₄-alkoxy, C₁₋₄alkyl, amino or hydroxy group; phenyl or phenyl (page 1 – “optionally” is not limiting).

As per claim 15: wherein a low melting point solid or a liquid medium comprising water and an organic solvent (example 1, page 3, lines 68-106) wherein the compound of formula 1 is not formula 3 or a salt thereof (page 1, formulas 1 and 3).

As per claim 16: a compound of formula 1 or a salt thereof and a low melting point solid or a liquid medium comprising water and an organic solvent (example 1, page 3, lines 68-106).

As per claim 17: a concentration of less than 500 ppm of halide ions, wherein parts refer to parts by weight relative to the total weight of the concentration (page 1).

As per claim 18, less than 50 ppm of divalent or trivalent metals, wherein parts refer to parts by weight relative to the total weight of the composition (page 1).

Claims 2-4, 19, 20, 22, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sparks (US 2370500 A) and Ciba Limited (GB 741578 A), and further in view of Murcia et al. (US 20010012027 A1).

Ciba Limited discloses the following claim limitations:

The ink composition of claims 1 and 6.

Ciba Limited does not disclose the following claim limitations:

As per claim 2: the composition is applied to the substrate by means of an ink jet printer.

As per claim 3: the image is text, a picture, a photorealistic image, or a combination thereof.

As per claim 4: the substrate is paper, plastic, metal, or glass.

As per claim 19: the substrate is a paper, an overhead slide, or a textile material.

As per claim 20: an inkjet printer cartridge, optionally refillable, comprising one or more chambers and a composition.

As per claims 22 and 23: an overhead projector slide or a textile material.

Murcia et al. disclose the following claim limitations:

As per claim 2: the composition is applied to the substrate by means of an ink jet printer [0002].

As per claim 3: the image is text, a picture, a photorealistic image, or a combination thereof [0004].

As per claim 4: the substrate is paper, plastic, metal, or glass [0008].

As per claim 19: the substrate is a paper, an overhead slide, or a textile material [0008].

As per claim 20: an inkjet printer cartridge, optionally refillable, comprising one or more chambers and a composition (figure 2).

As per claims 22 and 23: an overhead projector slide or a textile material [0008].

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the ink taught by Ciba Limited with the disclosure of Murcia et al. in order to provide a method for printing high quality images.

Allowable Subject Matter

Claim 13 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

Applicant's arguments with respect to claims 1-13, 15-20, 22, and 23 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LAURA E. MARTIN whose telephone number is

Art Unit: 2853

(571)272-2160. The examiner can normally be reached on Monday - Friday, 7:00 - 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen D. Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/L. E. M./

Laura E. Martin

/Manish S. Shah/
Primary Examiner, Art Unit 2853